REMARKS

Claims 1-6 remain pending, and claim 3 is currently amended. No claims are canceled or added.

Claims 2 and 3 stand rejected under 35 U.S.C. § 112, first paragraph, as not supported by an enabling disclosure. Applicant respectfully traverses this rejection.

Regarding claim 2, the Office Action indicates that the specification does not describe how a "receiving member/element is formed using a material having 'translucency'." However, claim 2 does not recite that a "receiving member/*element*" is formed using a material having translucency. Instead, the claim recites that the "receiving member," a component first recited in parent claim 1, last paragraph, is formed using material having translucency. Applicant's specification clearly describes such subject matter, for example, on page 9, middle paragraph, "... the receiving member 15 is formed using material having translucency such as quartz glass, but it is not limited thereto." Accordingly, applicant must respectfully disagree that claim 2 does not comply with 35 U.S.C. § 112, first paragraph.

Regarding claim 3, the Office Action indicates that the specification does not describe a receiving member that is a "glass-like scatterer" and how a "receiving member of glass-like scatterer" functions as part of the invention. However, the specification, on page 15, middle paragraph, describes a light-emitting element formed out of the receiving member as a glass scatterer and arranged so that the receiving member can reflect and project light, which laterally enters the receiving member. Previously on page 14, uppermost paragraph segment, the specification described optically roughening the receiving member 15 of the first embodiment and the upper surface and/or lower surface of the periphery side of the table 60 of the second embodiment into a glass scatterer of frosted glass. In this construction, light from an illuminant

may enter laterally. Accordingly, applicant must respectfully disagree that claim 3 does not comply with 35 U.S.C. § 112, first paragraph.

In view of the explanations above, applicant solicits the withdrawal of the non-enablement rejection.

Applicant amends claim 3 for clarity and not to change its scope.

Claims 1-3, 5, and 6 stand rejected under 35 U.S.C. § 102(b) as anticipated by Aoyama et al., U.S. Patent No. 5,194,743. Applicant respectfully traverses this rejection.

Claim 1 describes an alignment apparatus for aligning a generally plate-like work. The claim specifies that the alignment apparatus has a "table," which has a loading plane positioned inside the periphery of the work.

Claim 1 further specifies that the alignment apparatus has a "receiving member," which is

> ... provided outside said table and is positioned on the generally same plane as said loading plane; and the periphery of the receiving member has a plane configuration so as to come to a position further outside the periphery of the work.

Claims 2, 3, and 6 depend from claim 1, so they also recite this subject matter.

Claim 5 also describes an alignment apparatus for aligning a generally plate-like work. This claim also specifies that the alignment apparatus has a "table" with a loading plane.

Claim 5 further specifies that the table of the alignment apparatus is:

> ... formed out of material having translucency, and is formed into a size so that the periphery edge thereof comes to a position further outside the periphery of said work.

Applicant explains in the following why Aoyama et al. does not teach the subject matter quoted above. Accordingly, the anticipation rejection cannot be proper.

Regarding claim 1, the Office Action indicates that element "32" of Aoyama et al. is a table as claimed. However, Aoyama et al. states in column 8, line 56, that reference sign "32"

denotes a first signal processing system. The Office Action also indicates that "Fig. 4" shows "table (32)," but there is no "32" in Figs. 4A-4B.

Figs. 1 and 2 (and Figs. 4A-4B) disclose turn table 18, which is capable of holding and rotating the work, wafer W. (Column 7, lines 43-45.) Perhaps the PTO intended to rely on turn table 18 to anticipate the "table" recited in claim 1, because no other element of Aoyama et al. apparently has a receiving member to contact and support the work. The PTO may have interpreted the figures as showing that turn table 18 has a loading plane positioned inside the periphery of the work.

However, as discussed above, claim 1 also specifies that the receiving member of the alignment apparatus is "provided outside said table" on generally the same plane as the loading plane, and no such receiving member is apparent in Aoyama et al. The Office Action indicates that element "18" is a receiving member as claimed, but "18" designates the turn table. If turn table 18 is relied upon to teach the receiving member, the Office Action would need to identify an element outside of which turn table 18 is provided, and Fig. 2 shows that there is no such element.

As also discussed above, claim 1 specifies that the periphery of the receiving member has a plane configuration so as to come to a position "further outside" the periphery of the work. This is another reason that turn table 18 cannot anticipate the receiving member, because Figs. 1, 2, and 4A-4B clearly show that the periphery of turn table 18 does not extend beyond the periphery of wafer W.

Applicant also acknowledges that the Office Action cites "col. 3, line 49-65" of Aoyama et al. as demonstrating that this reference anticipates the claims. However, the cited text does not state that the periphery of turn table 18 extends beyond the periphery of wafer W.

Accordingly, the explanation in the Office Action cannot justify the anticipation rejection of claim 1, and, in applicant's own study of Aoyama et al., no anticipating disclosure is found. Thus, the anticipation rejection of claim 1, and of claims 2, 3, and 6 depending therefrom, cannot be proper.

Regarding claim 5, the Office Action provides no explanation whatsoever in the section discussing the anticipation rejection based on Aoyama et al. Thus, the anticipation rejection of claim 5 is unjustified. In applicant's own study of Aoyama et al., no such justification is found. As discussed above, claim 5 specifies that the table of the alignment apparatus is formed into a size such that the periphery edge comes to a position "further outside" the periphery of said work, and applicant explains above why Aoyama et al. does not teach this subject matter.

We note that the Office Action, at the bottom of page 4 (in a section discussing an obviousness rejection[1]), states that:

> Aoyama et al. is silent regarding said table is formed out of material having translucency, and is formed into a size so that the periphery edge thereof comes to a position further outside the periphery of said work.

Applicant agrees with this statement. (Applicant also believes that Aoyama et al. does not implicitly teach this subject matter, either.) Because Aoyama et al. does not teach this subject matter, the anticipation rejection of claim 5 cannot be proper.

In view of the explanations above, applicant solicits the withdrawal of the non-enablement anticipation rejection of claims 1-3, 5, and 6.

As an aside, applicant notes that the possibility that the PTO may have intended to rely on Hickman, U.S. Patent No. 6,519,036, instead of on Aoyama. (Note, for example, the recitations "table (32)(Fig. 4)" and "sensor (38)".) However, because Aoyama was officially

[1] Applicant acknowledges that the preceding paragraph in the Office Action states that claim *4* is rejected. Perhaps, such indication was an error.

applied in the Office Action, applicant is obliged to respond accordingly. If Hickman were to be applied in a later Office Action, applicant would respond appropriately.

Nonetheless, applicant notes at this time that Hickman also does not disclose a table or a receiving member that comes to a position further outside the periphery of the work as claimed. As is clear from Fig. 4, wafer table 32 does *not* extend as far as semiconductor wafer 10. Thus, even if the anticipation rejection were based on Hickman instead of Aoyama, it would still be improper.

Claim 4 stands rejected under 35 U.S.C. § 103(a) as obvious over Aoyama et al. Applicant respectfully traverses this rejection.

The obviousness rejection of claim 4 depends on Aoyama et al. properly anticipating parent claims 1, 2, and 3. However, as explained above, Aoyama et al. does not properly anticipate those claims. Thus, the obviousness rejection of claim 4 cannot be proper.[2]

Accordingly, applicant requests the withdrawal of the obviousness rejection based on Aoyama et al.

The Office Action indicates on page 4 that claim 4 is rejected under 35 U.S.C. § 103(a) as obvious over Aoyama et al. in view of Yamaguchi et al., U.S. Patent No. 6,825,915. However, claim 5 is discussed in the immediately following paragraph in the Office Action, thus implying that the intent was to reject claim 5 instead. Regardless of whether claim 4 or claim 5 is intended, applicant explains in the following why the rejection is improper.

Claim 4 specifies that the receiving member of the alignment apparatus is detachably attached around the periphery of the table. Above, we explain why Aoyama et al. (and Hickman) does not teach both a "receiving member" and a "table" as claimed. The Office

[2] Hickman does not anticipate claims 1, 2, and 3, either, as explained above. Therefore, if it were intended to reject dependent claim 4 instead based on Hickman, such rejection would not be proper.

Action provides no discussion of how Yamaguchi et al. would supposedly have suggested modifying the alignment apparatus to have the claimed features.

Accordingly, if the intent was to reject claim 4 as obvious over Aoyama et al. (or Hickman) in view of Yamaguchi et al., the rejection would be unjustified.

If instead the intent was to reject claim 5 as obvious over Aoyama et al. (or Hickman) in view of Yamaguchi et al., the Office Action would need to explain properly how Yamaguchi et al. supposedly would have suggested modifying the alignment apparatus of Aoyama et al. (or Hickman) to have the following features:

(1) the table formed out of material having translucency; and

(2) the table formed into a size so that the periphery edge thereof comes to a position further outside the periphery of the work.

(As discussed above, the Office Action indicates Aoyama et al. is silent with respect to these features.) For the following reason, applicant submits that Yamaguchi et al. does not provide the suggestion to modify the apparatus of the primary reference.

Aoyama et al. discloses spot sensors 24, 27, and 28 provided to detect the position of a wafer's edge. (Column 8, lines 66-67.) Fig. 1 clearly shows that turn table 18 is not formed into a size so that its periphery edge extends beyond the periphery of the wafer W. (Hickman provides an analogous disclosure in its Fig. 4.) Thus, there is no need to form turn table 18 out of material having translucency, because the table is not likely to block signals of spot sensors 24, 27, and 28. Nonetheless, claim 5 is rejected based on the reasoning that Yamaguchi et al. would have suggested modifying turn table 18 to have the claim features quoted above.

Regarding these claim features, the Office Action references table 16 of Yamaguchi et al., which is formed of a transparent material (column 6, lines 40-45) and extends beyond the periphery of a wafer supported thereon (Fig. 1). However, claim 5 does not become obvious just

because Aoyama et al. (or Hickman) discloses some of the claim features and Yamaguchi et al. discloses the remaining features. An Office Action must also indicate why the Yamaguchi et al. disclosure would have motivated a person skilled in the art to incorporate the cited features of Yamaguchi et al. into the Aoyama et al. (or Hickman) alignment device.[3]

The Office Action indicates that such modification would allow lights from an emitter to reach a receiver to determine the location of the wafer edge. However, the *unmodified* Aoyama et al. (and Hickman) alignment apparatus already has this capability. Therefore, the Office Action does not provide a valid reason that someone would have wanted to modify the device to resemble more the Yamaguchi et al. apparatus. Thus, the Office Action does not justify the rejection.

In applicant's own study of the prior art, no motivation is found for the modification upon which the obviousness rejection is based. Yamaguchi et al. discloses an apparatus that bonds two wafers. (Column 5, line 43.) Pressing means 13 provides a pressing force for this purpose. (See column 6, lines 10-27.) Perhaps, if table 16 and electrostatic clutch 7 did not extend beyond the peripheries of wafers 2a and 2b, the pressing force on the outer regions of the wafers would not be as strong as on the inner regions. Perhaps the bond in the outer regions would not be as strong or maybe the wafers would be weakened or even break.

The Office Action does not identify any statement in Aoyama et al. that its device is used for bonding two wafers. Thus, there is no apparent disclosure that Aoyama et al. would need its turn table 18 to extend as far as table 16 and electrostatic clutch 7 of Yamaguchi et al. extend. Therefore, the disclosure in Yamaguchi et al. of table 16 and electrostatic clutch 7 extending beyond the peripheries of wafers 2a and 2b is not a sufficient disclosure to support a holding that

[3] Applicant notes the recitation "Park" in the Office Action, page 5, top, presumably a reference to U.S. Patent No. 6,710,886. Because the Office Action does not state that Park is relied upon to justify a rejection, the recitation at this point in the Office Action appears to have been inadvertent.

it would have been obvious to modify turn table 18 of Aoyama et al. (or Hickman) to extend as far as described in claim 5.

At this time, applicant comments on the Yamaguchi et al. disclosure of using transparent material for electrostatic clutch 7 and table 16 (column 6, lines 6-9 and 41-45). In the Yamaguchi et al. device, light is transmitted through light guide 10 to prism device 12. (See also column 6, lines 56-65.) Fig. 1 shows that the light is not directed to the vicinity of the *edges* of wafers 2a and 2b. That is, Yamaguchi et al. does not disclose the use of transparent material for a table to determine the location of a wafer's edge, so applicant respectfully disagrees with the assertion in the Office Action that Yamaguchi et al. would suggest a modification for making this determination.

In view of the remarks above, applicant solicits the withdrawal of the obviousness rejection based on Aoyama et al. and Yamaguchi et al.

In a separate matter, applicant notes that the Office Action does not acknowledge the claim of January 13, 2004 for foreign filing priority under 35 U.S.C. § 119. Applicant requests that the PTO provide such acknowledgement.

The Office Action also does not list the U.S. Patent issued to Aoyama et al. (asserted to reject claims) on the form PTO-892. Applicant requests that the PTO provide a form PTO-892, acknowledges that the PTO considered the materiality of Aoyama et al.

In view of the remarks above, applicant now submits that the application is in condition for allowance. Accordingly, a Notice of Allowability is hereby requested. If for any reason it is believed that this application is not now in condition for allowance, the Examiner is welcome to contact applicant's undersigned attorney at the telephone number indicated below to discuss resolution of the remaining issues.

If this paper is not timely filed, applicant petitions for an extension of time. The fee for the extension, and any other fees that may be due, may be debited from Deposit Account No. 50-2866.

Respectfully submitted,

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